

ABSTRACT

A method for detecting line under frequency (LUF) events and initializing load shedding of loads located near the electrical disturbance without customer and utility intervention is disclosed. In one example embodiment, the LUF detection system measures the time period of each power line cycle and then compares the measured time period to a utility-configurable trigger period. If the cycle length is greater than or equal to the trigger period, a counter is incremented. If the cycle is less than the trigger period, the counter is decremented. If the counter is incremented to a counter trigger, an under-frequency condition is detected and the LUF response either controls the load or temporarily disconnects it. A restore response is initialized after the frequency rises above a restore value and an under-frequency counter counts down to zero.